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ABSTRACT

The booklet presents drawings and text on water activities for parents of handicapped and high risk infants and toddlers. Objectives of water activities are discussed, and the development of a water program is described. Stages in adjustment to water are considered, and techniques to facilitate adjustment are explained. Floating, submerging, and group game approaches are noted. (CL)

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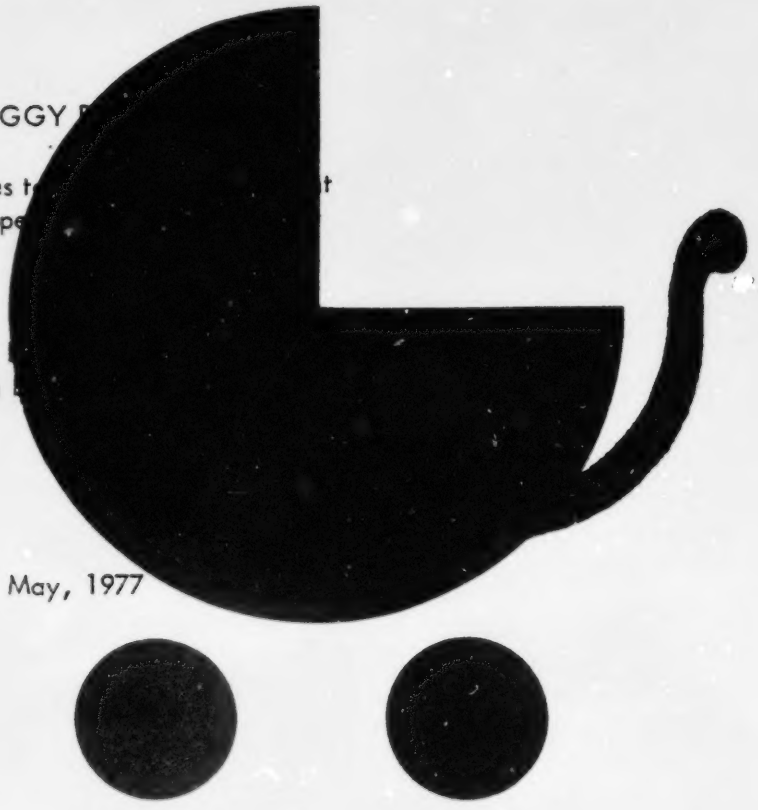

BABY BUGGY P

Water Activities t t
for Handicappe

Patricia
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May, 1977

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Figure 1.
In the progression to rolling, the adult holds the child in bent arms.

Figure 2.
The adult then extends the arms, so that the child moves down into the water.

Figure 3.
In a back floating position, the child's legs are around the adult's waist, while the child is eased back into the water.

Figure 4
When the child is at ease in the water, he/she is maintained with little adult support. The child's arms are free to move about, or reach for something overhead.

Figure 5
The cerebral palsied child is positioned so the child's neck rests on the adult's shoulder. The toy held overhead attracts the child's attention.

Figure 6
An infant can float on his back in the water with head support from the mother.

Picture the light reflecting off the water, lane markers, and tile deck of a swimming pool. But then, instead of classes of older children, imagine a pretty blond cerebral palsied three-year-old who is refusing to get out of the water. Picture the two-year-old curly-haired boy who has very little head control when he is propped up, managing to smile and hold his head up, with control, when he and his mother are in the swimming pool. Picture the infant who had surgery before he was three months old, floating contentedly on his back, with his mother providing some support as he needs it. These are not imaginary children--they actually exist. They, along with other children, have developed a variety of skills and a sense of enjoyment in a unique program developed for helping handicapped and high risk infants and their parents, the Macomb 0-3 Regional Project. A federally funded Bureau of Education for the Handicapped model project, the Macomb 0-3 Project is a part of the First Chance network of HCEEP (Handicapped Children's Early Education), and is housed in the College of Education at Western Illinois University.

The water activities sponsored by the Macomb Project were developed as an integral part of the program to enhance development. Babies and toddlers participate in the W.A.D.E. (water activities for developmental enhancement) program once a week. During the Mom and Tot Swim at the Macomb YMCA, parents and children in the Macomb Project participate in water activities under the guidance of one of the Project's Child Development Specialists. When people question the wisdom of teaching handicapped babies to swim, the Child Development Specialist replies that the program was not intended to teach the children to swim, or even to "drown proof" them. Then she asks whether they have ever gone swimming. "What is it about the water you enjoy?" she continues. "Its rushing motion against your skin? Your body's ease of movement? The weightless feeling as you float to the surface? Well, what if you couldn't move your arms and legs very well or had trouble holding your head up? The water might feel even better to you--a place where you could feel free enough to move body parts that didn't move well in any other place." When she explains the importance of water activities to parents in this manner, they begin to understand the potential of water as a developmental learning medium.

The Macomb 0-3 Project offers many other services and activities to their clients, including weekly home visits and bi-weekly sharing centers, where groups of parents and children spend the morning in a church or community building, involved in activities designed to further the child's development and the parent's skill in dealing with the child. Medical stabilization of a child, with visits and consultations with physicians, physical therapists, and other helping personnel, is already well underway before the parents are invited to participate in the W.A.D.E. program, another kind of sharing center.

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Besides furnishing an environment for developmental activities in water, the W.A.D.E. program provides for concentrated gross motor activities for young children. If a child has a particular physical handicap or is motorically delayed, the gross motor opportunities in water activities are invaluable.

The opportunity for water therapy (i.e., movements suggested by the physical therapist) for physically handicapped infants and toddlers provides an important justification for the W.A.D.E. program. Sometimes therapy commences too late for the afflicted child. One of the reasons for the Macomb Project's existence is the need to work with infants at an early age who are suspected of having developmental problems or specific disabilities. Some physical therapists believe that if therapy is started after three years, the child has already learned to use "bad" positions and movements (in compensation for the handicapping condition) which are difficult to eradicate as the child grows older. The staff member may not have had previous experience in therapy activities, but he or she can nonetheless work with the physical therapist and physician in helping the handicapped infant or preschool child.

In addition to opportunities for motor development and therapy, the water situation also provides an opportunity for the Macomb Project's children to watch and learn from other children. Observational learning is important for both child and parent. Parents not only have the opportunity to compare notes about child-rearing, but they also can observe techniques for working with their own child (as demonstrated by the Child Development Specialist). In addition, they can also observe the developmental movements and patterns of other children who are classified as "normal" or "typical." The concept of "mainstreaming," so often discussed and implemented in the public schools, begins early in a program such as W.A.D.E.

Teaching babies to swim is not a new concept. Neither is water therapy with handicapped children. Fitting the two concepts together, however, is what gives the Macomb Project's W.A.D.E. program its unique twist. An argument advanced by Claire Timmermans can be used for both typical infants and handicapped children. She believes that all babies should be taught to swim because learning to swim builds confidence. According to Timmermans, "At birth, every baby is a perfect swimmer--for 9 months he has lived in a fluid world, the womb. The association between water and ease can be maintained and reinforced if the baby is reintroduced to the element of water during his early days in the outer world. The only difference between being in the womb and being in the water after birth is the need for breathing." (Timmermans, 1975, p. 47)

Even though the W.A.D.E. program does not focus on actually teaching babies to swim, positive and successful water activity leads to increased confidence in physically handicapped youngsters as well as in those who are motorically delayed. Additionally, water activities can help teach them how to relax and enjoy the sensation. In the process the child also develops balance, coordination, and strength, much as the crawling child does in the early stages of locomotion.

Very specific values and objectives can be obtained in water activities. Physiological goals include increased circulation and strength, deep breathing, and control and coordination of body movements. The weightlessness the child feels in the water is also important. Water supports the body so that the effect of gravity is not as great as it is on land, a significant factor for motorically delayed children.

Organizing a Water Program

After the decision is made to include a water program for youngsters, several things must be considered. Water temperature between 90 to 94 degrees Fahrenheit is preferred to insure the comfort of the child. Water that is too cold serves to tighten muscles and to deter the positive aspects of water activities. A second consideration is the inclusion of typically developing children in the water program in order to provide models for the delayed and severely handicapped children who participate. In Macomb, the local YMCA provided the perfect place for the W.A.D.E. program. The YMCA Director agreed to let the children and parents come once a week for thirty minutes, at no charge, during the already operational Mom and Tot Swim. A school pool is another alternative.

Before a water program is initiated, one more thing should be considered. Permission from physicians and/or physical therapists may be indicated. Since the children in the Macomb Project have special needs, it was imperative that the physician and/or physical therapist give permission and provide input before the child could participate. These professionals prescribe specific movements or activities for each child under their care. If a child has a hearing problem, and has tubes in his or her ears, it is likely that a water program is contraindicated, unless the physician recommends a procedure for using specially prepared ear plugs. In any case, a signed physician's permit is obtained before a child participates in W.A.D.E.

In the Macomb Project, as well as in many infant projects throughout the country, the notion that the parent is primarily responsible for the child's development is extremely important. In most infant and early education projects,

the parent is helped to deal more effectively with the child. The Macomb Project staff work with the parent and child together in the water. The Child Development Specialist shows the parent a positioning technique and then encourages the parent to work with the child. As the parent participates along with the child, he or she is encouraged to deal effectively with whatever problems may arise, thereby gaining more self-confidence in his or her own skills as a parent.

Sometimes a parent is very hesitant about participating in the W.A.D.E. program. One mother explained to the Child Development Specialist that her child couldn't move well even on the ground and had very little head control. Her cerebral palsied child was two years old. She reluctantly agreed to try the program and was pleased to see that the child's legs and arms moved vigorously in the water. Her youngster was not afraid of the water and, indeed, he did maintain head control when he was in the pool. The smile on his face, and his continued interest in blowing bubbles when his face was submerged, indicated that head control motivation did not come from fear of the water.

Activities

When mothers or professionals ask questions which show concern about the advisability or even the effectiveness of the W.A.D.E. program, this concern stems from doubt that activities exist which can be used with infants and toddlers. "What good will it do?" they ask. Some voice a criticism of water activities in terms of their relationship to "real life" activities.

The first activities are those engaged in for the purpose of water adjustment. This can take place in the bathtub at home or even by letting the child play with small manipulative toys in a large basin of water. The initial visits to the pool are primarily exploratory in nature. The child is held on his or her mother's lap. (Since the W.A.D.E. program is on a week-day morning, fathers are usually unable to attend.) The mother lets the child dangle his feet in the water and encourages him to kick freely while she does the same. When the child seems content and ready (no tears, lots of smiles), she gently bounces him through the water. The Child Development Specialist explains to the mother that her attitude toward the water is important. She should feel free to submerge herself and swim a few strokes while the Child Development Specialist holds the child. Although sometimes mothers are not comfortable doing this, the staff member encourages them to function as an appropriate model for the child.

The next step is to position the child in various ways. The Child Development Specialist encourages the mother to hold the child next to her body, with the child's head over the mother's shoulder; then the mother moves the child to face the other direction, with the back of the child's head against her chest. A child can be straddled on the mother's hip, providing an opportunity to move the trunk and head more freely. After the child is at least somewhat relaxed, the mother can move him away from the body and hold him at an arm's length away, continually submerging him deeper and deeper into the water. The child's head should not be submerged until he or she shows signs of being in the middle stage of water adjustment described elsewhere in this article.

There are lead-up techniques which may precede the submerging activity. Many children will try to drink the pool water. This is one step closer to submerging their heads under water. Blowing bubbles is another technique; it is an important prearticulation skill as well as an introduction to breath control. After a child seems to be well adjusted to the water and not afraid of getting his face wet, it is time to begin work on floating and rolling in the water. A good progression to rolling involves the adult stretching out her arms and supporting the child on the surface of the water. The adult then bends the arms at an angle toward the chest, slowly returning them to a straight, stretched-out position, allowing the child to move downward until he or she again contacts the surface of the water. See Figures 1 and 2.

Back floating with toddlers is easy to begin using the following technique. The child's legs are positioned around the mother's waist and the child is eased back (Figure 3). The mother holds the child's hands until he is ready to relax his arms (Figure 4). When working with a spastic cerebral palsied child on the back float (Figure 5), the mother or another adult rests the child's neck on one of the adult's shoulders. The adult eases back to a floating position while walking backwards. This way the child feels the closeness of security under the neck, but also can feel the motion of the water under the body. With a small infant, as shown in Figure 6, two adults are needed. The mother supports the head, while the other adult attempts to get the child's attention by holding a shiny, attractive toy or rattle directly above the child's head so that the child can visually track the toy.

Young children enjoy group activities and circle games in the water. The child is supported by the mother who moves in the water. For example, the mothers move the children around in a circle, playing "Ring Around the Rosie." The ending is changed to "Ashes, ashes, we all blow bubbles!" Playing this game has been popular with the children in the Macomb Project, although adults may feel a bit self-conscious at first. Many other simple singing games and

rhymes can be adapted for water play. Such activities incorporate language development with motor skills and social learning.

Another way to stimulate movement is to bring floatable toys. The Macomb Project's collection includes small people, boats, ducks and eggs, small sprinkling cans, measuring cups, balls, and wind-up water animals.

During the thirty minutes the children are in the water, approximately ten minutes is spent using flotation devices, such as the small, inflatable inner-tubes and the cube belts which are placed around the child. These devices enable the child to move with less adult support and afford a little more independence. These aids are not used until the child is judged to be in the middle stage of water adjustment.

Stages of Water Adjustment

Individual differences in adapting to water are evident in the infants and toddlers in the Macomb Project. The children begin at different points and move through the stages of water adjustment at different rates. In the early stage, the child may be rigid in the water. He or she may cry and cling to the adult. Those who have had secure, happy playtime in the bathtub may adjust more quickly. For some, total water adjustment comes in less than a month, while others take several months to achieve a comfortable feeling in the water.

During the middle stage, the child's behavior indicates that he or she still needs to maintain close contact with the adult. The child also needs stable support, but is able to relax in familiar positions or movements. He or she may become rigid in unfamiliar positions, especially when placed on the back. Sometimes the child may cry, but is usually willing to try new movements if encouraged. It is important to work slowly and patiently with children in the first two stages.

When the child is totally adjusted to the water, he or she is relaxed in both prone and supine positions. The child puts his or her face in the water, blows bubbles, and seems happy (laughs, smiles). More independence is shown; the child needs less and less adult support and spontaneously tries a new movement or position.

Evaluation

There are several ways to evaluate the results of a program. Records of accomplishments are kept in the Macomb Project. Each time a child takes part in water activities, a participation sheet is completed. It describes the accomplishments of the day, the child's level of water adjustment, and notes any unusual event, as well as other pertinent comments. Members of the Macomb Project's staff take many slides and black and white photographs of the water activities. Slides of individual children taken over a period of several months viewed in succession provide information about developing skills. Parents also enjoy seeing the slides and photos and often ask for copies of project pictures. Special things show up in the slides, such as the rigidity of the child's body early in the experience, then the relaxation that comes after several months of participation. Parents' comments about the W.A.D.E. program have been positive and attendance is high. One mother told the Child Development Specialist that it really "felt good" to see her child moving so well in the water. She said that the water activities gave her new confidence in her ability to deal with her child.

Summary

Water activity for handicapped and high risk infants and toddlers provides an ideal medium for the development of gross motor as well as other skills (i.e., pre-speech). For motorically delayed youngsters, beginning such a program during the first year of life can be a key factor in preventing the development of certain physical problems. When handicapped infants and toddlers have the opportunity to participate in a program such as W.A.D.E., their motor development is enhanced. Parents, as an integral part of the program, learn a variety of activities to use with their children and at the same time gain confidence in their effectiveness as parents.

Reference

Timmermans, Claire. How to Teach Your Baby to Swim. New York: Stein and Day, 1975.

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